Call for Participation RoboCup 2025 Flying Robots League

July 15 - July 21, 2025 Salvador (Brazil)

https://2025.robocup.org/robocup-flying-robots/

The Flying Robot League (FRL) aims to stimulate the study and development of autonomous and intelligent flying robots for different tasks applied to the industrial and logistics sector. The Challenge is a reduced and playful model that tries to emulate logistical problems in an arena with two suspended bases for landings and takeoffs, a takeoff base, and three mobile land bases.

Among the research challenges still existing on autonomous and intelligent robots, the Flying Robot League aims to stimulate the development of aerial robotic systems and robust flight controllers (trajectory, altitude, and pose) with embedded, precise, and independent camera tracking and localization systems; high-capacity embedded processing; and devices for manipulating and loading objects.

We invite you to participate in the RoboCup 2025 Flying Robot League competition in Salvador, Brazil. If you are interested in participating, please register your team and follow the procedure outlined below. This league is promoted in partnership with RoboCup Rescue Robot League.

Important Dates

April 10, 2025 (23:59 AoE): Team Qualification Materials Submission

Deadline (TDP and Video)

April 15, 2025: Qualified Teams Announcement

July 15 – 20, 2025: Competition

Waiver of the team fee for 2025 Qualified Teams

The RoboCup Federation is pleased to announce a waiver of the team registration fee for the RoboCup competition for QUALIFIED teams in this new league. This fee applies only to the team fee but not to the members' registration fee.

A QUALIFIED team is one in which the TDP paper and TDP Challenge video were accepted as performing the required points. The waiver concerns only the team fee and does not imply any waiver of fees for team members.

Oualification

Qualification is based on a team's current performance, previous achievements in RoboCup, and scientific contributions in relevant areas in past years. In RoboCup 2025, up to 11 (eleven) teams will participate in the Flying Robots League. The top three teams from RoboCup Brazil Open 2024 (Capybots, Atena, and RoboCin) are automatically qualified after submitting an appropriate Team Description Paper (TDP) without needing the TDP challenge video. The team from Salvador (BahiaRT), home of the 2025 event, is also automatically qualified after submitting an appropriate Team Description Paper (TDP) without needing the TDP challenge video. The other seven teams will be selected through the qualification process involving the proper Team Description Paper (TDP) and the TDP Challenge video.

Oualification material consists of:

1. Team Description Paper (TDP)

The TDP should describe your research focus and ideas implemented by the team.

It should clearly describe your work and your contributions and specify what you have used from others' efforts (including, but not limited to, any source code released by other teams or their scientific work). In qualification, teams must be judged based on their work, so failing to acknowledge the work of others could result in immediate disqualification. The length of the TDP must be at least eight (8) pages and should not exceed ten (10) pages in Springer LNCS Style. Please do not send TDPs that you submitted to RoboCup in previous years.

Please submit the TDP as a PDF document with your team's name in the filename, i.e., Teamname_TDP.pdf.

The TDP needs to be done using the Springer Lecture Notes in Computer Science template¹, with a minimum of 6 and a maximum of 8 pages containing the following information:

- **Title:** must be the name of the team:
- **Authors:** must be the names of the team members (full name);
- Affiliation:
 - University where the team comes from;
 - Link to the team, group, or lab's webpage;
 - Phone number of 2 contacts for Whatsapp Group;
 - The e-mail of the captain of the team;
- Just below the Keywords, there should be a link to the execution of the TDP challenge performed by the team's UAV;
- As for the article itself, the TDP must contain:
 - 0.5 page maximum for the title, author's names, affiliation, abstract, keywords, and video link.
 - 1.5 pages maximum describing the used UAV (mechanics, electronics, sensors, etc);
 - 2 pages maximum describing with details the Navigation System (software, with open git-hub);
 - 3 pages describing how the team solved the TDP task, describing the proposed architecture and development, as well as presenting the obtained results and discussing them;
 - 1 page maximum for References.

2. TDP Challenge:

To be classified to participate in the RoboCup Flying Robot Trial League, the team must perform a TDP challenge and submit the video of the drone performing the desired task along with the written TDP. The task consists of one flying robot performing 2 (two) different plight paths (Position and Transverse) autonomously around a desired target. More details about the challenge can be found within the <u>Rulebook</u>. The video should be sent in a mp4 file with your team's name in the filename, i.e., Teamname TDP.mp4.

¹ See the link for the template at overleaf:

Please put all qualification material in a folder with your team name, create a tarball named teamname.tar.gz, and upload it to the registration form.

https://forms.gle/TsWg7FCuURRz41w77

You should upload only one file, including all your qualification materials.

If everything works fine, you will receive a confirmation. If you do not receive any confirmation within two (2) days, please contact the Organizing Committee.

If you encounter any problem sending your qualification materials, please don't hesitate to contact the OC.

Best Regards,

RoboCup 2025 Flying Robot League Organizing Committee

Remarks:

- This is a demo league proposed by the Brazilian regional committee;
- This league hasn't necessarily been approved for future RoboCup competitions yet. However, it is a proposal from the Brazilian regional committee to the RoboCup Federation to approve it as a permanent league in the following years.